stereo systems, including the high cost, lack of compatibility with the program format and the belief that stereo was not important to their listeners.[45] Parties that cite AM radio as a reason for adopting a single HDTV standard have a strained argument at best: first, they must prove that the decision of AM radio stations not to purchase stereo equipment is attributable solely to the Commission's decision not to select a single stereo standard, a questionable conclusion in light of the NTIA Report; second, they must prove that the failure to purchase stereo equipment is the reason for the decline in AM radio.[46]

Moreover, this entire argument rests on the assumption that AM radio is in an irreversible decline. While AM radio may be experiencing reduced audience share, there is no evidence in the record of this proceeding that it is no longer a viable, profit-making business. To the contrary, it appears that AM radio is in more of a transition than a death march. As music programming has shifted to FM, AM radio has adopted new formats which cater to community needs through specialty programming. According to Broadcasting, panelists at the National Association of Broadcasters' Radio '87 convention were upbeat about the

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[45] AM Stereo and the Future of AM Radio, National Telecommunications and Information Administration, at 11 (February 1987).

[46] The Commission recently reaffirmed its decision not to impose a single AM stereo standard. FCC News Release, Report No. MM-228, released January 14, 1988.

opportunities for AM radio to "make a comeback."[47] One panelist expressed the view that "[t]o win on AM we're going to have to do programming that's unique and compelling, has mass appeal, is difficult to duplicate, and not available on FM."[48]

AM radio is accepting this philosophy. Specialty formats, including news, information, talk, all-weather, all-comedy, all-sports, all-business, and motivational programming, are increasingly utilized in AM radio to reach segmented markets.[49] Some AM stations are considering regional or national syndication of their specialty programming.[50]

These program developments are a significant positive development for consumers. Rather than duplicating FM radio, AM radio is developing new and innovative sources and types of programming. This trend increases program diversity for consumers. It also belies the argument that the lack of a mandatory stereo standard has destroyed AM radio or harmed the public.

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[47] Broadcasting, September 14, 1987, at 54.

[48] Id.

[49] See Broadcasting, December 21, 1987, at 52.

[50] Id.

V. Enhanced NTSC Must Be Compatible With Existing NTSC Receivers Without Modification

From the perspective of cable consumers and cable operators, an enhanced NTSC system either is viewable on today's receivers, or it is not. If a converter box must be added or if the picture is seriously degraded, the signal is not "compatible." On this basis, Time Inc. disagrees with CBS's approach to this question.[51]

CBS suggests that "the most important problem with the conventional notion of 'compatibility' is that it is typically applied simplistically...."[52] Rather, CBS says, there are six levels of compatibility, ranging from present sets receiving and displaying HDTV transmissions (although there is no explanation how this can happen technologically), to an existing receiver being unable to display, in any form, HDTV transmissions and HDTV receivers being unable to display NTSC transmissions.

CBS is incorrect. The concept of compatibility is simplistic in its most important application -- at the viewer's television set. Time Inc.'s extensive experience with cable subscribers, and its frustrations with attempting to interface

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[51] Comments of CBS Inc. at 42-45.

[52] Id. at 42.

consumer electronics hardware to cable systems using converter boxes, leads it to believe that there is only one level of compatibility. From a consumer's perspective, "NTSC compatibility" either exists or it does not. For the consumer, compatibility means that the enhanced NTSC system yields an acceptable picture on essentially all existing NTSC receivers without modification and without adapter boxes of any kind. Receiver modifications result in warranty problems, safety hazards and consumer dissatisfaction.

Adapter boxes are a large capital investment if provided by a cable operator, reduce picture quality by redundant signal processing and decrease reliability. The most significant problem with conventional adapter boxes which interface at the RF terminals is that they cause consumer electronics interface problems. When signals must be modulated, passed through tuners and intermediate frequency amplifiers, and subjected to automatic gain control and automatic frequency control circuits, they become damaged. Degraded image quality results. Perhaps more importantly, adapters tend to interfere with the operation of consumer convenience features such as television remote controls and video cassette recorder timers, which become virtually useless. Moreover, CBS's reference to an "inexpensive adapter" is a misnomer.[53] "Inexpensive" is a relative term, and is quite different for a $2,500 large screen projection receiver than for

[53] Comments of CBS Inc. at 43.

a $45 black and white portable set. One of the salient points of the NTSC system is that it has facilitated the evolution of convenient small screen portable receivers. The concept of an adapter box is contrary to this important application.

VI. Standardized Connectors Should Be Used to Attach Consumer Products to Receivers

Consumers' home entertainment centers have begun to include an array of electronic devices. Interconnecting such products--for example, television receivers and VCRs -- has been accomplished by modulating the signals and passing them between devices at RF frequencies. Adapters are inserted in the signal path to accommodate new services such as stereo sound and cable television scrambled programming. This results in signal degradation, signal leakage, loss of such convenience features as remote controls and timers, and unnecessary expense.

A more consumer-friendly method of interconnection should be agreed upon before the already confusing trend of interconnection increases as various enhanced NTSC and HDTV systems and products become available. In our view, consumers would be best served by the availability of standard baseband interfaces, such as analog RGB baseband video and digital audio interface ports in television sets and video cassette recorders, which would allow convenient interconnection of system

components. Some have proposed a television receiver design involving slots for consumers to plug in circuit cards which add new features.[54] This approach is modeled after the computer industry practice. Another approach which may be more cost effective involves standardized connectors on the back of the products to pass baseband video and audio signals, and control signals, between various pieces of consumer equipment. An industry committee should work out the technical details, including any multiple scanning standards that may be required.

Ideally, one remote control easily would command the operation of all consumer electronic components. Development of enhanced NTSC and HDTV provides an opportunity to move in the direction of industry-recommended, FCC-endorsed standards[55] for interconnection which would better serve consumer needs.

VII. Conclusion

In its initial Comments, Time Inc. made the following principal points:

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[54] See, e.g., Comments of Professor Schrieber at 4.7.3.

[55] Time Inc. has been an active participant in the Electronic Industries Association committees working on baseband interfaces and the Consumer Electronics Bus. Either these committees themselves or committees modeled after them would be suitable for creating the industry-recommended standard for FCC review and endorsement.

1. Considerable research and development are necessary before the appropriate HDTV standard or standards can be identified. Therefore, the Commission should not establish any HDTV standard, but should give the marketplace time to develop and reach a consensus on the appropriate standard or standards which are necessary to implement HDTV;

2. Each distribution medium should be allowed to deliver HDTV in a way that is optimal for that medium -- HDTV quality should not be artificially limited to that provided by the least capable distribution medium;

3. NTSC enhancements should be compatible with existing television sets and allow retransmission of broadcast signals by cable operators without loss of quality or significant costs; and

4. If broadcasters ultimately agree on a standard and want the FCC to mandate that broadcast standard, we would not oppose such a development, assuming the mandated standard met the requirements of low cost and high quality cable distribution without interference to other services.

There was little disagreement with these principles in the

comments of other parties. Time Inc. urges the Commission to be guided by these principles as it makes the decisions that will impact the introduction of HDTV for American consumers.

Respectfully submitted,

Brian Conboy
Vice President-Government Affairs
Time Incorporated
1050 Connecticut Avenue, N.W.
Suite 850
Washington, D.C. 20036-5334

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